

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 40439	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FI2003/000846	International filing date (day/month/year) 07-11-2003	Priority date (day/month/year) 08-11-2002
International Patent Classification (IPC) or national classification and IPC B01L 3/02		
Applicant BIOHIT OY et al		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 24-03-2004	Date of completion of this report 20-01-2005
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Ender Dag / itw Telephone No. +46 8 782 25 00

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2003/000846

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☒ the international application as originally filed/furnished
- ☐ the description:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☐ the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☐ the drawings:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2003/000846

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	<u>1-4</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-4</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-4</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)**Documents cited in the International Search Report:**

D1: US 3855868 A
D2: DE 19708151 A1
D3: WO 9964159 A1
D4: US 20020053245 A1

The applicant describes the problem of the attachment of disposable pipette tips. Prior art discloses springs arranged to keep the plungers in their innermost position. The object of the present application is to provide and improve a spring mechanism of the pipette's suction tube to assure an even attachment of the disposable tips in a multichannel pipette, according to the applicant.

Document D1 discloses a multiple pipette which has inside its body a piston mover rod which is provided with a push button at its upper end and surrounded by a spiral spring. Once the rod has been pressed downwardly, the spring returns the rod to its original position so that liquid is sucked into containers connected with the lower ends of the cylinders and provided with points to which can be changed. The axial movement of the pistons in relation to the piston mover is prevented by springs (21, 22) (see column 3, lines 20-55, column 4, lines 7-32; figures 1, 3 and 4).

Document D2 discloses a multichannel pipette unit with removable tips (7) comprising an upper and a lower part (2, 4) accommodates a movement and an uncoupling mechanism (10, 11). The movement mechanism has an operating knob (14) which in

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

operation affects a piston (17) in the upper part and another piston (12, 70) in the lower part. The piston together with the operating knob is arranged with a coil spring (15, 81) to force the piston to its upper section. A cone-shaped suction tube is attached to each cylinder to which a removable tip can be adapted (see column 7, line 66-column 9, line 12; figures 1-3).

Document D3 discloses a method for removing a replaceable tip (2) in a suction device. The tip is removed by providing a removal means (4) which are movable between its inner home and outer removal positions. A compression spring (7) returns the removal means to its home position (6b) (see page 6, line 23-page 7, line 5, page 8, line 23-page 9, line 21, page 10, line 24-page 11, line 4; figures 1-6).

Document D4 discloses a dispensing apparatus having means for loading pipette tips in a dispense head (see whole document).

The invention according to claims 1-4 differs from what is known in D1-D4 in that the suction tube of a multichannel pipette comprises a resilient means which, when pressing the multichannel pipette against the rack (tips), is arranged to force the suction tube to its outermost position. The structure of the resilient members is specifically designed for a certain type of tip to ensure an even attachment of the tips. The problem to be solved in documents D1-D4 does not address the same problem to be solved in the claimed invention. D1-D4 describes the arrangement of the springs to keep the plungers in their innermost position or pulled inwards.

Hence it is not obvious for a person skilled in the art to modify D1-D4 to solve the same problem as referred in the claimed invention.

The invention according to claims 1-4 is novel, industrial applicable and is considered to involve an inventive step.